Solid recovered fuels - Methods for the determination of sulphur (S), chlorine (Cl), fluorine (F) and bromine (Br) content

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15408:2011 sisaldab Euroopa standardi EN 15408:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 15408:2011 consists of the English text of the European standard EN 15408:2011.
Standard on kinnitatud Eesti Standardikeskuse 31.03.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.03.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 09.03.2011.	Date of Availability of the European standard text 09.03.2011.
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English Version

Solid recovered fuels - Methods for the determination of sulphur (S), chlorine (Cl), fluorine (F) and bromine (Br) content

Combustibles solides de récupération - Méthodes pour la détermination de la teneur en soufre (S), en chlore (Cl), en fluor (F), et en brome (Br)

Feste Sekundärbrennstoffe - Verfahren zur Bestimmung des Gehaltes an Schwefel (S), Chlor (Cl), Fluor (F) und Brom (Br)

This European Standard was approved by CEN on 22 January 2011.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 15408:2011) has been prepared by Technical Committee CEN/TC 343 “Solid recovered fuels”, the secretariat of which is held by SFS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

This document supersedes CEN/TS 15408:2006.

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This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document differs from CEN/TS 15408:2006 only editorially.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

Determination of total sulphur, chlorine, fluorine and bromine content of solid recovered fuels (SRF) is necessary for environmental and technical reasons both in the production and combustion stage.

During the combustion process they are usually converted to sulphates and halides. These reaction products contribute significantly to corrosion and environmentally harmful emissions.

This method consists of an oxygen combustion procedure followed by trapping of sulphur, chloride, fluoride and bromide in an absorbing solution and subsequent determination by different techniques.

Alternatively, direct automatic techniques can be used for S and Cl determination. Other methods could also be used provided that it is demonstrated that they give the same results.

1 Scope

This European Standard specifies the determination of S, Cl, F and Br in solid recovered fuels of various origin and composition after combustion in oxygen atmosphere. This method is applicable for concentrations over 0,025 g/kg, depending on the element and on the determination technique. In the case of fluorine this method is applicable for concentration over 0,015 g/kg.

Insoluble halides and sulphate present in the original sample or produced during the combustion step are not completely determined by these methods.

This European Standard provides recommendations concerning standardised methods for determination of halides and sulphate in the solution obtained after combustion.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15357:2011, *Solid recovered fuels — Terminology, definitions and descriptions*

EN 15413[1)], *Solid recovered fuels — Methods for the preparation of the test sample from the laboratory sample*

EN 15414-3, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 3: Moisture in general analysis sample*

EN ISO 3696:1995, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987)*

EN ISO 10304-1:2009, *Water quality — Determination of dissolved anions by liquid chromatography of ions — Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate (ISO 10304-1:2007)*

EN ISO 17294-2, *Water quality — Application of inductively coupled plasma mass spectrometry (ICP-MS) — Part 2: Determination of 62 elements (ISO 17294-2:2003)*

ISO 9297, *Water quality — Determination of chloride — Silver nitrate titration with chromate indicator (Mohr's method)*

ISO 10359-1, *Water quality — Determination of fluoride — Part 1: Electrochemical probe method for potable and lightly polluted water*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15357:2011 and the following apply.

3.1
halogen content
sum of halogens contained as organic and inorganic compounds in the solid recovered fuels, which can be converted to halides (fluoride, chloride, bromide, iodide) by combustion and then absorbed or dissolved in aqueous solution

[1)] To be published.